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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/709,312	11/13/2000	Yong-Kyu Jang	6192.0166.AA	3446

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EXAMINER

AKKAPEDDI, PRASAD R

ART UNIT PAPER NUMBER

2871

DATE MAILED: 10/08/2002

#8

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/709,312

Applicant(s)

JANG ET AL.

Examiner

Prasad R Akkapeddi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other:

## DETAILED ACTION

### *Specification*

1. The abstract of the disclosure is objected to because "it has more than 150 words". Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. ✓ Claims 1, 4, 11 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention: The following statements are not clear: (a) in claim 1, lines 12-13 – "the transmissive pixel electrode of whole pixel electrode exists and a reflective area in which the reflective electrode exists" – If the transmissive pixel electrode takes up the whole pixel electrode then how can a reflective electrode can also exist in the same area? (b) In claim 4, lines 6-7 – "one for the transmissive pixel electrode and the other for the transmissive pixel electrode" (c) In claims 11 and 14 – "passivation layer treated to take embossment" is unclear - consider replacing with 'the micro lens is formed on the passivation layer subsequently by embossing techniques' and (d) In claim 10, lines 15-16 – "a separation insulator existing between the reflective pixel electrode and the transmissive pixel electrode does not exist in the transparent area" – is not clear.

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4. Claim 5 recites the limitation "separating insulator" in claim 1. There is insufficient antecedent basis for this limitation in the claim. ✓

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1-16 rejected under 35 U.S.C. 102(e) as being anticipated by Kubo et al (Kubo) (U.S. Patent No. 6,195,140).

As to claim 1: Kubo discloses a reflective transmission type thin film transistor liquid crystal display (Fig. 46) with a glass substrate (201), at least one thin film transistor (204) on the substrate for controlling a pixel a passivation layer (244) having at least one contact hole (245) in a source region of the thin film transistor, a transmissive pixel electrode (246) which is formed on the passivation layer and is connected with a source electrode (249) of the source region through

a contact hole (245) and a reflective pixel electrode (242) which is formed on the passivation layer and is connected with the source electrode (249) of the source region through a contact hole (245) wherein pixel area (206) is composed of a transparent area in which only the transmissive pixel electrode (Region T) exist and a reflective area (Region R) in which the reflective pixel electrode exist.

As to claim 2: Kubo discloses a separating insulator (Figs. 48C and 49C) between the transmissive pixel electrode (246) and the reflective pixel electrode (242).

As to claims 3-10: Kubo discloses in Figs. 46-51 that the transmissive pixel electrode and the separating insulator have a hole (245) revealing some part of the source region (249) and the reflective pixel electrode (242) which is formed over the transmissive pixel electrode (246) is connected with the source electrode of the part of the source region via the hole (Kubo refers to contact holes 245). In Fig. 50C, Kubo discloses that the transmissive pixel electrode which is formed over the reflective pixel electrode and the reflective pixel electrode is made with metals including aluminum and the transmissive pixel electrode is made with indium metal oxide lineage (Col 38, lines 23-26). In Fig. 48A, Kubo discloses that the transparent area takes form and shape of window of the reflective area. In Fig. 50C, Kubo discloses that the reflective electrode is on top of the transmission electrode without any separation insulator.

As to claim 11: In Fig. 10, Kubo discloses a micro lens for focusing light. As to the product-by-process limitation "the reflective transmission type thin film

transistor liquid crystal display wherein the *passivation layer is made with photosensitive transparent insulator and the surface of the passivation layer is treated to take embossment* which forms micro lens for focusing light” it has been recognized that “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

As to claim 12: Kubo discloses a reflective transmission type thin film transistor liquid crystal display with a glass substrate (201) at least one thin film transistor on the substrate for controlling a pixel (204), a first pixel electrode (203) which is deposited and patterned concurrently with gate (210) of the thin film transistor with an upper non-oxidizing metal layer (203b) and a lower transparent conductor layer (203a), a passivation layer (244) which is formed over the thin film transistor and the first pixel electrode and which has a contact hole (245) at a source contact region and a hole (shown but not numbered in Fig. 46) at the transparent window and neighboring region, and a second type pixel electrode (206) which is formed over the passivation layer, is patterned to cover whole pixel area except the transparent window region, and is

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connected with a source electrode of the thin film transistor through the contact hole (245) and connected with the non-oxidizing metal layer of the first type pixel electrode at the neighboring region (middle of Fig. 46).

As to claims 13-16: Kubo discloses (Col. 38, 64-66) a photosensitive material for the passivation layer with a thickness of 3 micrometers and a micro lens for focusing the light and chromium as one of the non oxidizing metals (Col. 37, line 19).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prasad R Akkapeddi whose telephone number is 703-305-4767. The examiner can normally be reached on 7:00AM to 5:30PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on 703-308-4842. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0530.

*PKA*

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September 30, 2002

*William L. Sikes*

William L. Sikes  
Supervisory Patent Examiner  
Technology Center 2800